SNOW SURVEYS
and WATER SUPPLY OUTLOOK for
ALASKA

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

ALASKA SOIL CONSERVATION DISTRICT

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
APR. 1, 1977

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SNOW COURSE MEASUREMENTS BY A SURVEY TEAM IN UTAH'S WASATCH RANGE.
ORC-254-10

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, 6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

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SNOW SURVEYS AND WATER SUPPLY OUTLOOK FOR ALASKA

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WEIGHING SNOWPACK WATER-CONTENT

ALASKA SUMMARY
as of
APRIL 1, 1977

Snowfall during March was well above average over most of the State. Most drainages south of the Alaska Range received double the normal monthly increment. Same thing for the east end of the Brooks Range and Porcupine Drainage.

The exception is the Tanana Drainage where March snowfall was highly variable, with some areas, notably the Chena and Salcha Rivers below normal.

The area by area summary is as follows:

KOYUKUK DRAINAGE

The winter's snowpack here is very close to normal and about the same as it was at this time last year.

M7-L-22020H

UPPER YUKON DRAINAGE

Very heavy snowfall occurred during March over the entire Upper Yukon Drainage. The headwaters snowpack in Canada are now only slightly below average. The Eagle-Chicken area is still about 10-15% below normal. In sharp contrast, the east end of the Brooks Range is 40-50% above normal with several courses, most notably those at Arctic Village, Fort Yukon and Venetie, maximum for the past 14 years of record.

TANANA-CHENA DRAINAGES

Snowfall during March was highly variable in the Tanana Drainage. The mountains surrounding the Upper Tanana generally received heavy snowfall, the Delta Junction area received about average amounts, while within the Chena Drainage some courses received above, some below, and some an average increment for the month. Overall, the Chena Drainage is still way below normal and now even slightly behind last year.

Snowmelt runoff in the Chena River for the April to July period is now forecast for 360,000 acre-feet, or 64% of the recent 15 year average. This is down four percent from a month ago; meanwhile, the Little Chena forecast is up 8 percent based on March conditions. All forecasts assume that average precipitation will occur for the remainder of the forecast period.

KUSKOKWIM DRAINAGE

Average snowfall for March was received in the Upper Kuskokwim Valley. The winter's snowpack is still, however, well below normal, about 20 percent below at Farewell and 40 percent below at Lake Minchumina. This is 15 percent less than conditions reported one year ago.

COPPER DRAINAGE

The Copper Drainage received variable snowfall amounts during March. A few areas received normal amounts while other regions such as the west side of the basin received fairly heavy increments. Rivers draining from the Chugach Range have the heaviest snowpack in 20 years in their headwaters. The rest of the Copper River headwaters are well above average also. The broad basin floor is generally about 10 percent above normal.

MATANUSKA-SUSITNA DRAINAGES

March snowfall was heavy throughout the Upper Susitna and Matanuska Drainages. The Lower Susitna Valley received generally closer to normal amounts. The winter snowpack is now about 30 percent above average, overall, in the Susitna Drainage, and about 40 percent above in the Matanuska.

UPPER COOK INLET, KENAI PENINSULA, AND PRINCE WILLIAM SOUND

Heavy snowfall, at least double the average expected for March, occurred everywhere in the region. The high elevation snowpack is probably the greatest in the last 20 years as reflected by Worthington Glacier course near Valdez. Nearly all courses unaffected by mid-winter melt are at all time maximums for their shorter periods of record.

Snowmelt runoff will be heavy throughout the region. Forecast for Ship Creek near Anchorage is 90,000 acre-feet for the April-July period, which is 52 percent above the recent 15 year average.

SOUTHEAST

March snowfall was also heavy in Southeast. Near Juneau, the snowpack has finally caught up to near average or slightly above for the winter.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year 2/	PAST RECORD THOUSAND ACRE FEET Average †
YUKON RIVER at Eagle	31,000	90%	April-July	35,920	34,925
PORCUPINE RIVER near Ft. Yukon	8,500	118%	April-July	8,949	7,200*
SALCHA RIVER near Salchaket	470	61%	April-July	428	767
CHENA RIVER at Fairbanks	360	64%	April-July	348	560
LITTLE CHENA RIVER near Fairbanks	74	80%	April-July	69	93*
YUKON RIVER at Ruby	73,000	109%	April-July	58,420	67,012
SHIP CREEK near Anchorage 1/	90	152%	April-July	54	59
SOUTH FORK CAMPBELL CREEK at Canyon Mouth near Anchorage	20.4	153%	April-July	12.5	13.3

1/ Measured flow adjusted for diversion.

2/ Provisional data, subject to revision.

* Estimated.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Number	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Water Content (inches) Average †	Years of Previous Record
AS OF MARCH 15, 1977								
TANANA-CHENA:								
Caribou Mine	55	1115	3/15	18a	3.5e	3.4e	5.4	10
Cleary Summit	64	2230	3/15	25a	5.1e	5.5e	5.9	13
Little Chena	62	2200	NO	SURVEY		4.7e	5.6	14
Lower Chena	59	2000	3/15	22a	4.3e	---	---	0
Mt. Ryan	61	2950	3/15	29a	6.1e	5.1e	6.5	14
Munson Ridge	56	3100	3/15	32a	6.4e	9.8e	11.8	14
Teuchet Creek	57	1640	3/15	21a	4.2e	---	---	0
Upper Chena	58	3000	3/15	32a	6.4e	7.4e	8.2	8
KOYUKUK DRAINAGE:								
Cold Foot Camp	109	1000	3/16	31	5.4	---	---	0
Dietrich Camp	110	1550	3/16	27	4.5	---	---	0
Prospect Creek Camp	108	980	3/16	32	6.0	---	---	0
Table Mountain	111	2200	3/16	26	4.5	---	---	0
YUKON DRAINAGE:								
Five Mile	106	400	3/16	30	5.7	---	---	0
Thirty Mile	107	1300	3/16	40	8.1	---	---	0
AS OF APRIL 1, 1977								
KOYUKUK DRAINAGE:								
Anaktuvuk Pass	75	2100	NO	SURVEY		3.8	4.1	7
Bettles Field	74	640	3/28	35	7.0	6.9	7.4	10
Cold Foot Camp	109	1000	4/1	31	5.7	6.4	7.3	6
Dietrich Camp	110	1550	4/1	26	4.7	4.4	4.5	6
Lake Todatonten	73	980	3/28	29a	5.8e	5.3e	5.5	9
Prospect Creek Camp	108	980	4/1	31	6.4	6.6	6.5	6
Table Mountain	111	2200	4/1	25	5.6	4.9	4.4	3
West Buttons		1600	3/29	24a	4.8e	N/S	5.4	3

a - aerial marker e - estimated N/S - No Survey

† 1958-1972 period.

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Water Content (inches) Average †	Years of Previous Record
YUKON DRAINAGE:								
Arctic Village	78	2300	3/29	31	5.9	3.0	3.5	13
Black River	84	650	3/30	29	7.3	3.9	4.3	11
Boundary	90	3300	3/30	25a	4.7e	4.0e	4.8	9
Chandalar Lake	76	2040	3/29	27	5.1	3.4	3.9	11
Chicken Airstrip	91	1650	3/30	16	2.6	2.0	3.0	10
Circle City	85	600	3/30	29	5.1	4.0	4.4	11
Circle Hot Springs	86	860	3/29	27	6.9	3.4	---	2
Coleen River	80	1100	3/29	21a	3.8e	2.7e	2.9	11
Dempsey Creek	87	950	3/30	28a	5.6e	3.4e	4.2	7
Eagle Village	89	900	3/30	20	3.9	3.7	4.4	10
Five Mile	106	400	4/1	29	6.2	4.6	5.0	6
Fort Yukon	83	430	3/30	24	5.5	3.0	3.8	11
Koness Lake	79	1790	3/29	23	4.0	2.9	3.1	10
Log Cabin (B.C.)	105	2880	3/28	47	14.3	15.6	13.1	17
Mt. Fairplay	92	3100	3/30	16a	3.1e	3.4e	3.9	6
Nation River	88	3050	3/30	31a	6.8e	N/S	6.6	6
Squaw Lake	77	2150	3/29	27a	5.1e	3.1	3.9	9
Thirty Mile	107	1300	4/1	37	8.6	N/S	7.5	4
Venetie	82	610	3/29	22a	4.4e	3.0	2.9	11
Vundik Lake	81	950	3/29	20a	4.0e	3.0e	2.8	10
KUSKOKWIM DRAINAGE:								
Farewell Lake	70	1090	3/28	15	2.9	3.3	3.6	10
Lake Minchumina	71	730	3/28	17	2.6	3.5	4.5	10
TANANA-CHENA:								
Big Delta	52	980	3/30	9	1.6	2.3	1.1	17
Bonanza Creek	66	1150	4/1	18	3.6	3.2	4.7	9
Caribou Creek	68	1440	4/1	21	4.0	5.0	5.2	7
Caribou Mine	55	1115	3/28	22	4.4	4.6	6.0	11
Cleary Summit	64	2230	3/28	28	6.0	6.7	7.9	17
Colorado Creek	63	750	3/28	20	3.8	3.6	5.4	11
Fielding Lake	49	3000	3/31	60	15.5	9.0	11.6	15
Fort Greely	50	1420	3/30	7	1.2	3.0	3.7	10
French Creek	53	2010	3/30	20	3.8	4.0	6.9	15
Granite Creek	51	1240	4/1	15	2.4	3.2	3.3	9
Haystack Mountain	67	1950	4/1	28	5.2	5.7	7.1	7
Little Chena	62	2200	3/28	32	6.6	5.5	5.8	15
Little Salcha	54	1500	3/30	16	2.6	3.4	5.8	15
Lower Chena	59	2000	3/28	26	5.2	---	---	0
Mentasta Pass	47	2430	3/31	44	9.6	3.6	6.0	15
Monument Creek	60	1900	NO SURVEY			5.2	5.0	3
Mt. Ryan	61	2950	NO SURVEY			6.6	7.7	15
Munson Ridge	56	3100	3/28	38	7.8	14.5	14.2	15
Poker Creek (CRREL)	69	1025	4/1	19	3.5	3.9	5.2	7
Teuchet Creek	57	1640	NO SURVEY			3.7	4.3	4
Tok Junction	46	1650	3/31	15	3.2	3.1	3.4	17
Upper Chena	58	3000	3/28	36	7.8	N/S	9.3	9
Wien Lake	72	1020	3/28	20	3.4	3.6	4.4	9
Yak Pasture	65	540	3/28	20	4.1	3.3	4.4	17
COPPER RIVER:								
Haggard Creek	48	2540	3/31	38	8.7	3.2	5.4	13
Little Nelchina	31	4160	4/2	37a	7.0e	4.0e	4.8	9
Mankomen Lake	45	3050	DELAYED REPORT			3.7	6.6	10
St. Anne's Lake	28	1990	3/31	24	4.4	3.7e	4.9	13
Sanford River	27	2280	3/30	26a	5.5e	3.7e	5.0	10
Tsaina River	35	1500	3/29	74	23.8	12.9	13.5	5
Worthington Glacier	36	2400	3/29	100	38.5	22.2	19.5	19

a - aerial marker e - estimated N/S - No Survey

† 1958-1972 period.

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Water Content (inches) Average +	Years of Previous Record
MATANUSKA-SUSITNA:								
Alexander Lake	18	200	3/31	49	14.6	8.8	10.3	13
Bald Mountain Lake	23	2150	3/31	52a	13.0e	5.7e	7.4	13
Chelatna Lake	20	1650	3/31	36a	10.1e	10.5e	10.3	11
Clearwater Lake	26	3100	3/31	27	5.0	3.8e	5.3	12
Devil's Canyon	121	1350	3/31	48a	9.6e	---	---	0
Fog Lakes #2	24	2250	3/31	32a	7.4e	4.1	6.0	7
Independence Mine	33	3300	3/30	84	25.1	20.6	19.9	10
Lake Louise	29	2400	4/2	29	4.5	2.9	4.0	13
Monahan Flat	25	2710	3/31	42	9.6	5.9	6.4	13
Oshetna Lake	30	2950	4/2	25	4.3	2.8	3.7	13
Peters Hills	21	2010	3/31	68a	20.4e	15.8e	15.6	8
Sheep Mountain #2	34	2900	3/29	33	7.6	4.6	4.7	5
Skwentna	19	160	3/31	48	12.7	9.4	9.9	10
Talkeetna	22	350	3/31	34	8.7	9.2	8.0	10
Willow Airstrip	32	150	4/2	38	9.0	5.9	6.3	12
UPPER COOK INLET:								
Arctic Ski Bowl	5	3000	4/1	48	16.5	10.3	12.2	13
Arctic Valley #1	1	500	4/1	6	1.0	2.7	2.5	13
Arctic Valley #2	2	1000	4/1	8	1.3	3.6	2.9	13
Arctic Valley #3	3	2030	4/1	30	8.3	6.4	5.5	13
Arctic Valley #4	4	2330	4/1	33	8.5	7.2	6.3	13
Bird Creek	8	2350	3/31	59	21.1	19.2	16.1	10
Indian Pass	7	2350	3/31	90	35.0	22.8	19.7	10
McArthur	17	120	3/31	55a	18.7e	18.7e	19.4	13
Mt. Alyeska	10	1200	4/1	134	54.9	33.2	31.2	4
Ship Creek	6	1750	3/31	38	11.7	11.9	10.3	10
South Campbell Creek	9	1200	3/31	20	5.9	5.8	7.7	4
PRINCE WILLIAM SOUND:								
Lowe River	37	550	3/29	73	23.5	15.6	14.0	4
Valdez	38	50	3/29	84	28.5	16.0	16.0	4
KENAI PENINSULA:								
Bertha Creek	11	850	4/1	61	20.9	15.7	13.6	7
Bridge Creek, Lower	16	1100	3/31	38	15.4	12.5	11.8	5
Bridge Creek, Upper	15	1300	3/31	51	17.3	13.6	12.3	5
Jean Lake	14	620	4/1	9	2.0	3.8	3.6	7
Kenai Summit	12	1390	4/1	49	14.6	11.1	10.9	7
Moose Pass	13	700	4/1	10	1.6	6.9	6.0	7
SOUTHEAST ALASKA:								
Cropley Lake	94	1650	4/1	99	32.0	---	---	0
Douglas Ski Bowl	93	1640	4/1	123	40.7	63.9	42.5	9
Eagle Crest	95	1000	4/1	58	16.1	---	---	0
Fish Creek	96	500	4/1	14	3.8	---	---	0
Harriet Top	102	2000	NO	SURVEY		N/S	65.3	4
Hunt Saddle	103	1500	NO	SURVEY		N/S	55.4	4
Lake Shore	104	660	NO	SURVEY		N/S	34.7	4
Speel River	98	280	3/30	90	36.4	55.2	32.5	12

a - aerial marker e - estimated N/S - No Survey

+ 1958-1972 period.

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Water Content (inches) Average +	Years of Previous Record
NORTH SLOPE:					INCREMENT SINCE LAST READING		ACCUMU-LATIVE TOTAL	
* "Wyoming" Precipitation Gages (for the 1977 Water Year)			DATE					
Barrow	115	15	9/20	Initial	Reading			
			10/20		.6		.6	
			11/23		1.1		1.7	
			12/23		.4		2.1	
			1/22		1.0*		3.1*	
			4/3		.7*		3.8*	
Barter Island	117	15	10/4	Initial	Reading			
			11/6		1.2		1.2	
			11/22		.2		1.4	
			12/21		1.6		3.0	
Candle	119	20	12/30	Initial	Reading			
			2/18		.6		.6	
Kavik	118	200	10/6	Initial	Reading			
			11/4		.8		.8	
			11/26		.1		.9	
			12/27		1.0		1.9	
Kugruk River	120	225	9/18	Initial	Reading			
			12/30		2.6		2.6	
			3/18		1.1		3.7	
Jago River	122		10/6	Initial	Reading			
			11/7		1.3		1.3	
			11/22		.4		1.7	
			12/21		1.2		2.9	
Meade River	116	200	9/20	Initial	Reading			
			10/21		1.0		1.0	
			11/23		.2		1.2	
			12/23		.4		1.6	
			1/21		1.4		3.0	
			2/5		.7*		3.7*	
			4/2		.6*		4.3*	
Point Hope	123	20	11/3	Initial	Reading			
			12/9		.2		.2	
			2/5		.2		.4	
			2/12		.1		.5	
Prudhoe Bay	114	30	8/3	Initial	Reading			
			11/7		1.3		1.3	
			11/23		.3		1.6	
			12/27		.8		2.4	
Sagwon	113	1000	11/11	Initial	Reading			
			1/26		1.6		1.6	
			2/27		.4		2.0	
Toolik River	112	3100	9/20	Initial	Reading			
			11/11		1.6		1.6	
			1/26		1.4		3.0	
			2/28		.3		3.3	

* readings include some rhime ice

+ 1958-1972 period.

* The Wyoming Gage is a new device for accurately collecting rain and snowfall in windy unprotected areas. It was developed during the period 1969 through 1974 near Laramie, Wyoming, by the University of Wyoming and the United States Forest Service Forest and Range Experiment Station. The study area was a barren, wind swept ridge, similar to Alaska's tundra. During this period the new design consistently caught ± 10 percent of the "control" gages located in protected areas nearby.

The basic configuration of the gage has two concentric rings of snow fences surrounding the orifice of the precipitation storage can. The four foot snow fence "mesh" is rigidly attached to a solid framework. The outer circle is ten feet off the ground and 20 feet in diameter; the inner circle is eight feet off the ground and 10 feet in diameter. The level of the storage can orifice is seven feet above the ground surface. A precipitation gage of any standard design, whether recording or non-recording can be used.

The Wyoming Gage "works" during howling snow storms by creating a slight vaccuum area within the fencing material which pulls down into the storage can the snow particles which might be traveling more nearly horizontal than vertical. Without the windscreen, the precipitation gage would collect only a small percent of falling snow during windy periods. During blowing snow conditions between storms. almost all of the moving material is passed beneath the gage.

The initial network of Wyoming gages on Alaska's north slope has been accomplished through the efforts of Alaskan Arctic Gas Study Company and the University of Alaska's Geophysical Institute. They cooperatively established the first gages at Barrow and Meade River in late 1975. Alaskan Arctic Gas Study Company then established gages at Prudhoe Bay, and Kaktovik (Barter Island) that same year. They built two more sites in Alaska in 1976 on the Kavik and Jago Rivers. The "word" about Wyoming gages began to get around and the Soil Conservation Service installed two gages on the Seward Peninsula at Candle and the Kugruk River. The U. S. Army Cold Regions Research and Engineering Laboratory also established sites at Sagwon, Toolik River and at Point Hope.

Four additional Wyoming gages were put in operation in 1976 but data is unavailable at this time. Two are on the arctic coastal plain in Yukon Territory, installed by Alaskan Arctic Gas Study Company and two are in the Caribou-Poker Creek Research Watershed operated by the Institute of Northern Forestry in Fairbanks.

USDA SCS PORTLAND, OR 1976 M7-EN-22020

SNOW COURSES AND RELATED DATA MEASURING SITES

ALASKA

1977

SCALE 1 2,500,000

ALBERS EQUAL AREA PROJECTION

LEGEND

- State Boundary
- Juneau — State Capital
- Palmer — Town Less Than 5000 Population
- Fairbanks — Town 5000 to 25,000 Population
- ANCHORAGE — Town Over 25,000 Population

Towns of less than 5000 omitted from map unless incorporated or required for orientation purposes

- Lake or Reservoir
- Large Stream
- Small Stream
- State Highway
- Snow Data Measuring Site

U.S.S.R.

CANADA

BERING SEA

ARCTIC OCEAN

GULF OF ALASKA

PACIFIC OCEAN

SEWARD PENINSULA

NORTON SOUND

ST. LAWRENCE ISLAND

NUNIVAK ISLAND

ALASKA PENINSULA

KODIAK ISLAND

ALEUTIAN ISLANDS

KENAI PENINSULA

Barrow, Wainwright, Point Lay, Point Hope, Beechey Point, Gordan, Umiat, Kivalina, Noatak, Katzebue, Kiana, Shishmaref, Kobuk, Bettles, Allakaket, Fort Yukon, Salmon, Christian, Wiseman, Hughes, Livengood, Circle, Miller House, Eagle, Taylor, Teller, Council, Nome, Golovin, Koyuk, Gambell, Savoonga, Tanana, Manley Hot Springs, Eureka, Fairbanks, Nenana, Richardson, Chicken, Jack Wade, Big Delta, Tanacross, Nulato, Golena, Ruby, Unalakleet, St. Michael, Kwikpak, Kantishna, Takotna, Northway, Paxson, Slana, Nabesna, Alakanuk, Ophir, McGrath, Mountain Village, Petersville, Talkeetna, Gakona, Chitina, Tonsina, Valdez, Cordova, Hooper Bay, Holy Cross, Marshall, Aniak, Sleetmute, Tanunak, Mekoryuk, Kwigamuir, Bethel, Kashegelok, Anegak, Kaskanak, Nondalton, Iliamna, Tyonek, Anchorage, Palmer, Whittier, Kenai, Seward, Hamer, Seldovia, Portlock, Platinum, Tuglak, Ekwak, Oillingham, Naknek, Egegik, Ugashik, Kanatak, Kariuk, Old Harbor, Shuyak I., Afognak I., Mormot I., Kadiak, Chignik, Perryville, Trinity Islands, Chirikof I., Fort Randal, False Pass, Unimak, Unga I., Nagai I., Shumagin Islands, Akutan, Akun I., Dutch Harbor, Unalaska, Fort Glen, Unalaska I., Umnak I., Fox Islands, Nikolski, St. Matthew I., St. Paul I., St George I., Yakutat, Skagway, Haines, Juneau, Douglas, Hoonah, Chichagof I., Sitka, Kake, Kuiu I., Petersburg, Wrangell, Zarembo I., Etolin I., Ketchikan, Prince of Wales I., Klawock, Craig, Hydaburg, Metlakatla, Dall I., Montague I., Hinchinbrook I., Knight I., Kayak I.

USDA-SCS PORTLAND OR 1978 M7-EN-22020

INDEX O

MAP NO.	COURSE NAME	COURSE NO. ***	ELEV.	LAT.	LONG.	MEAS. DA
1	Arctic Valley #1	49MM1	500	61°13'N	149°40'W	2,3,4,5
2	Arctic Valley #2	49MM2	1000	61°13'N	149°37'W	2,3,4,5
3	Arctic Valley #3	49MM3	2030	61°14'N	149°35'W	2,3,4,5
4	Arctic Valley #4	49MM4	2330	61°14'N	149°33'W	2,3,4,5
5	Arctic Ski Bowl	49MM5	3000	61°15'N	149°31'W	2,3,4,5
6	Ship Creek	49MM7MPS	1750	61°08'N	149°28'W	2,3,4,5
7	Indian Pass	49MM8A	2350	61°05'N	149°29'W	2,3,4,5
8	Bird Creek	49MM6A	2350	61°06'N	149°20'W	2,3,4,5
9	South Campbell Creek	49MM11	1200	61°08'N	149°42'W	2,3,4,5
10	Mt. Alyeska	49LL15S	1200	60°57'N	149°05'W	2,3,4,5
11	Bertha Creek	49LL2	850	60°45'N	149°51'W	2,3,4,5
12	Kenai Summit	49LL3	1390	60°40'N	149°28'W	2,3,4,5
13	Moose Pass	49LL4	700	60°31'N	149°30'W	2,3,4,5
14	Jean Lake	50LL1	620	60°31'N	150°11'W	2,3,4,5
15	Bridge Creek (UP)	51KK1	1300	59°42'N	151°28'W	3,4,5
16	Bridge Creek (LO)	51KK2	1100	59°40'N	151°32'W	3,4,5
17	McArthur	52LL1A	120	61°00'N	152°00'W	2,3,4,5
18	Alexander Lake	50MM1A	200	61°45'N	150°54'W	2,3,4,5
19	Skwentna	51MM1A	160	61°58'N	151°12'W	2,3,4,5
20	Chelatna Lake	51NN1a	1650	62°31'N	151°29'W	2,3,4,5
21	Peters Hills	50NN1a	2010	62°31'N	150°57'W	2,3,4,5
22	Talkeetna	50NN2	350	62°18'N	150°05'W	2,3,4,5
23	Bald Mtn. Lake	49NN1A	2150	62°15'N	149°45'W	2,3,4,5
24	Fog Lakes	48NN2A	2250	62°47'N	148°29'W	2,3,4,5
25	Monahan Flat	47001A	2710	63°18'N	147°39'W	2,3,4,5
26	Clearwater Lake	46NN1A	3100	62°59'N	146°58'W	2,3,4,5
27	Sanford River	45NN2A	2280	62°13'N	145°04'W	2,3,4,5
28	St. Anne's Lake	46MM1A	1990	61°53'N	146°03'W	2,3,4,5
29	Lake Louise	46NN2A	2400	62°17'N	146°30'W	2,3,4,5
30	Oshetna Lake	47NN1A	2950	62°23'N	147°29'W	2,3,4,5
31	Little Nelchina	47NN2a	4160	62°07'N	147°36'W	2,3,4,5
32	Willow Airstrip	50MM2	150	61°45'N	150°03'W	2,3,4,5
33	Independence Mine	49MM10	3300	61°45'N	149°25'W	3,4,5
34	Sheep Mountain	47MM2	2900	61°47'N	147°30'W	3,4,5
35	Tsaina River	45MM4	1500	61°12'N	145°30'W	3,4,5
36	Worthington Glacier	45MM2	2400	61°10'N	145°45'W	3,4,5
37	Lowe River	45MM3	550	61°06'N	145°50'W	3,4,5
38	Valdez	46MM2	50	61°08'N	146°20'W	2,3,4,5
39	Wolverine Glacier (A)	48LL1	2130	60°23'N	148°54'W	1,2,4,5
40	Wolverine Glacier (B)	48LL2	3610	60°25'N	148°55'W	2,3,4,5
41	Wolverine Galcier C	48LL3	4430	60°25'N	148°55'W	1,2,4,6
42	Gulkana Glacier A	45006	4590	63°15'N	145°29'W	2,3,4,5
43	Gulkana Glacier B	45007	5480	63°17'N	145°26'W	2,3,4,5
44	Gulkana Glacier C	45008	6360	63°19'N	145°29'W	5,6,7
45	Mankomen Lake	44NN1	3050	63°00'N	144°32'W	2,3,4,5
46	Tok Junction	43001	1650	63°18'N	143°00'W	2,3,4,5
47	Mentasta Pass	43NN1	2430	62°51'N	143°30'W	2,3,4,5
48	Haggard Creek	45NN1A	2540	62°42'N	145°28'W	2,3,4,5
49	Fielding Lake	45001A	3000	63°18'N	145°33'W	2,3,4,5
50	Ft. Greely	45005	1420	63°57'N	145°45'W	1,2,3,4
51	Granite Creek	45004	1240	63°57'N	145°24'W	1,2,3,4
52	Big Delta	45PP1	980	64°14'N	145°58'W	2,3,4,5
53	French Creek	46PP2MA	2010	64°43'N	146°40'W	2,3,4,5
54	Little Salcha	46PP3	1500	64°38'N	146°44'W	2,3,4,5
55	Caribou Mine	45PP2A	1115	64°40'N	145°40'W	2,3,4,5
56	Munson Ridge	46PP1AP	3100	64°52'N	146°13'W	2,3,4,5
57	Teuchet Creek	45PP3	1640	64°57'N	145°31'W	2,3,4,5
58	Upper Chena	44QQ1AP	3000	65°07'N	144°55'W	2,3,4,5
59	Lower Chena	44QQ6	2000	65°04'N	144°59'W	2,3,4,5
60	Monument Creek	45QQ2	1900	65°03'N	145°55'W	2,3,4,5
61	Mt. Ryan	46QQ1AP	2950	65°16'N	146°07'W	2,3,4,5
62	Little Chena	46QQ2AP	2200	65°08'N	146°32'W	2,3,4,5
63	Colorado Creek	46PP4S	750	64°52'N	146°39'W	1,2,3,4
64	Cleary Summit	47QQ1A	2230	65°03'N	147°24'W	1,2,3,4
65	Yak Pasture	47PP1	540	64°52'N	147°55'W	2,3,4,5
66	Bonanza Creek	48PP1	1150	64°45'N	148°20'W	2,3,4,5
67	Haystack Mtn.	47QQ2	1950	65°08'N	147°38'W	2,3,4,5
68	Caribou Creek	47QQ3	1440	65°09'N	147°35'W	2,3,4,5
69	Poker Creek	47QQ4S	1025	65°08'N	147°32'W	2,3,4,5
70	Farewell Lake	53NN1A	1090	62°34'N	153°35'W	3,4
71	Lake Minchumina	52001A	730	63°53'N	152°18'W	3,4
72	Wien Lake	51PP1A	1020	64°22'N	151°18'W	3,4
73	Lake Todatonten	52RR1a	980	66°10'N	152°55'W	3,4
74	Bettles Field	51RR1A	640	66°35'N	151°32'W	3,4
75	Anaktuvuk Pass	51TT1A	2100	68°09'N	151°41'W	3,4

* USDA-SCS-PORTLAND, OR. 1976 M7-ON-22020

AGENCIES AND ORGANIZATIONS COOPERATING IN ALASKA SNOW SURVEYS

FEDERAL

- Department of Agriculture
  - Forest Service
    - Institute of Northern Forestry
    - North Tongass National Forest
    - South Tongass National Forest
    - Chugach National Forest
- Department of Commerce
  - National Oceanic and Atmospheric Administration
    - NOAA National Weather Service
- Department of Defense
  - U.S. Army Corps of Engineers
  - U.S. Army Cold Regions Research and Engineering Laboratory
- Department of Interior
  - Bureau of Land Management
  - Geological Survey
  - Alaska Power Administration

STATE

- Alaska Department of Fish and Game
- Alaska Department of Highways
- Alaska Department of Natural Resources, Division of Parks
- Alaska Soil Conservation District
  - Fairbanks Soil Conservation Sub-district
  - Homer Soil Conservation Sub-district
  - Kenai-Kasilof Soil Conservation Sub-district
  - Kenny Lake Soil Conservation Sub-district
  - Kodiak Soil Conservation Sub-district
  - Montana Soil Conservation Sub-district
  - Palmer Soil Conservation Sub-district
  - Salcha-Big Delta Soil Conservation Sub-district
  - Wasilla Soil Conservation Sub-district
- University of Alaska

MUNICIPALITIES

- Municipalaity of Anchorage

PRIVATE

- Mt. Alyeska Report, Inc.

INDEX OF ALASKA SNOW COURSES

MAP NO.	COURSE NAME	COURSE NO. *	ELEV.	LAT.	LONG.	MEAS. DATES *	MEAS. BY *
1	Arctic Valley #1	49MM1	500	61°13'N	149°40'W	2,3,4,5	c
2	Arctic Valley #2	49MM2	1000	61°13'N	149°37'W	2,3,4,5	c
3	Arctic Valley #3	49MM3	2030	61°14'N	149°35'W	2,3,4,5	c
4	Arctic Valley #4	49MM4	2330	61°14'N	149°33'W	2,3,4,5	c
5	Arctic Ski Bowl	49MM5	3000	61°15'N	149°31'W	2,3,4,5	c
6	Ship Creek	49MM7MPS	1750	61°08'N	149°28'W	2,3,4,5	a
7	Indian Pass	49MM8A	2350	61°05'N	149°29'W	2,3,4,5	a
8	Bird Creek	49MM6A	2350	61°06'N	149°20'W	2,3,4,5,7	a
9	South Campbell Creek	49MM11	1200	61°08'N	149°42'W	2,3,4,5	a
10	Mt. Alyeaka	49LL15S	1200	60°57'N	149°05'W	2,3,4,5	a,b
11	Bertha Creek	49LL2	850	60°45'N	149°51'W	2,3,4,5	a
12	Kenai Summit	49LL3	1390	60°40'N	149°28'W	2,3,4,5	a
13	Mooae Paaa	49LL4	700	60°31'N	149°30'W	2,3,4,5	a
14	Jean Lake	50LL1	620	60°31'N	150°11'W	2,3,4,5	a
15	Bridge Creek (UP)	51KK1	1300	59°42'N	151°28'W	3,4,5	a
16	Bridge Creek (LO)	51KK2	1100	59°40'N	151°32'W	3,4,5	a
17	McArthur	52LL1A	120	61°00'N	152°00'W	2,3,4,5	a,c
18	Alexander Lake	50MM1A	200	61°45'N	150°54'W	2,3,4,5	a,c
19	Skwentna	51MM1A	160	61°58'N	151°12'W	2,3,4,5	a,c
20	Chelatna Lake	51NN1a	1650	62°31'N	151°29'W	2,3,4,5	a,c
21	Petera Hills	50NN1a	2010	62°31'N	150°57'W	2,3,4,5	a,c
22	Talkeetna	50NN2	350	62°18'N	150°05'W	2,3,4,5	a,c
23	Bald Mtn. Lake	49NN1A	2150	62°15'N	149°45'W	2,3,4,5	a,c
24	Fog Lakes	48NN2A	2250	62°47'N	148°29'W	2,3,4,5	a,c
25	Monahan Flat	47001A	2710	63°18'N	147°39'W	2,3,4,5	a,c
26	Clearwater Lake	46NN1A	3100	62°59'N	146°58'W	2,3,4,5	a,c
27	Sanford River	45NN2A	2280	62°13'N	145°04'W	2,3,4,5	a,c
28	St. Anne's Lake	46MM1A	1990	61°53'N	146°03'W	2,3,4,5	a,c
29	Lake Louise	46NN2A	2400	62°17'N	146°30'W	2,3,4,5	a,c
30	Oshetna Lake	47NN1A	2950	62°23'N	147°29'W	2,3,4,5	a,c
31	Little Nelchina	47NN2a	4160	62°07'N	147°36'W	2,3,4,5	a,c
32	Willow Airatrip	50MM2	150	61°45'N	150°03'W	2,3,4,5	a,c
33	Independence Mine	49MM10	3300	61°45'N	149°25'W	3,4,5	a
34	Sheep Mountain	47MM2	2900	61°47'N	147°30'W	3,4,5	a
35	Tsaina River	45MM4	1500	61°12'N	145°30'W	3,4,5	a
36	Worthington Glacier	45MM2	2400	61°10'N	145°45'W	3,4,5	a
37	Lowe River	45MM3	550	61°06'N	145°50'W	3,4,5	a
38	Valdez	46MM2	50	61°08'N	146°20'W	2,3,4,5	a
39	Wolverine Glacier (A)	48LL1	2130	60°23'N	148°54'W	1,2,4,5,6,7	g
40	Wolverine Glacier (B)	48LL2	3610	60°25'N	148°55'W	2,3,4,5,6,7	g
41	Wolverine Galcier C	48LL3	4430	60°25'N	148°55'W	1,2,4,6,7	g
42	Gulkana Glacier A	45006	4590	63°15'N	145°29'W	2,3,4,5,6,7	g
43	Gulkana Glacier B	45007	5480	63°17'N	145°26'W	2,3,4,5,6,7	g
44	Gulkana Glacier C	45008	6360	63°19'N	145°29'W	5,6,7	g
45	Mankomen Lake	44NN1	3050	63°00'N	144°32'W	2,3,4,5	a
46	Tok Junction	43001	1650	63°18'N	143°00'W	2,3,4,5	a
47	Mentasta Pass	43NN1	2430	62°51'N	143°30'W	2,3,4,5	a
48	Haggard Creek	45NN1A	2540	62°42'N	145°28'W	2,3,4,5	a
49	Fielding Lake	45001A	3000	63°18'N	145°33'W	2,3,4,5	a
50	Ft. Greely	45005	1420	63°57'N	145°45'W	1,2,3,4,5,7	a
51	Granite Creek	45004	1240	63°57'N	145°24'W	1,2,3,4,5,7	a
52	Big Delta	45PP1	980	64°14'N	145°58'W	2,3,4,5	a
53	French Creek	46PP2MA	2010	64°43'N	146°40'W	2,3,4,5,7	a
54	Little Salcha	46PP3	1500	64°38'N	146°44'W	2,3,4,5,7	a
55	Caribou Mine	45PP2A	1115	64°40'N	145°40'W	2,3,4,5,7	a
56	Munson Ridge	46PP1AP	3100	64°52'N	146°13'W	2,3,4,5,7	a
57	Teuchet Creek	45PP3	1640	64°57'N	145°31'W	2,3,4,5	a
58	Upper Chena	44QQ1AP	3000	65°07'N	144°55'W	2,3,4,5,7	a
59	Lower Chena	44QQ6	2000	65°04'N	144°59'W	2,3,4,5,7	a
60	Monument Creek	45QQ2	1900	65°03'N	145°55'W	2,3,4,5	a
61	Mt. Ryan	46QQ1AP	2950	65°16'N	146°07'W	2,3,4,5,7	a
62	Little Chena	46QQ2AP	2200	65°08'N	146°32'W	2,3,4,5,7	a
63	Colorado Creek	46PP4S	750	64°52'N	146°39'W	1,2,3,4,5,7	a
64	Cleary Summit	47QQ1A	2230	65°03'N	147°24'W	1,2,3,4,5,7	a
65	Yak Paature	47PP1	540	64°52'N	147°55'W	2,3,4,5	a
66	Bonanza Creek	48PP1	1150	64°45'N	148°20'W	2,3,4,5	b
67	Haystack Mtn.	47QQ2	1950	65°08'N	147°38'W	2,3,4,5	d
68	Caribou Creek	47QQ3	1440	65°09'N	147°35'W	2,3,4,5	d
69	Poker Creek	47QQ4S	1025	65°08'N	147°32'W	2,3,4,5,7	d
70	Farewell Lake	53NN1A	1090	62°34'N	153°35'W	3,4	a
71	Lake Minchumina	52001A	730	63°53'N	152°18'W	3,4	a
72	Wien Lake	51PP1A	1020	64°22'N	151°18'W	3,4	a
73	Lake Todatonten	52RR1a	980	66°10'N	152°55'W	3,4	a
74	Bettles Field	51RR1A	640	66°35'N	151°32'W	3,4	a
75	Anaktuvuk Pass	51TT1A	2100	68°09'N	151°41'W	3,4	a
76	Chandalar Lake	48SS1A	2040	67°30'N	148°30'W	3,4	a
77	Squaw Lake	48SS2a	2150	67°33'N	148°15'W	3,4	a
78	Arctic Village	45TT1A	2300	68°05'N	145°35'W	3,4	a
79	Koness Lake	44SS1A	1790	67°55'N	144°08'W	3,4	a
80	Coleen River	42SS1A	1100	67°44'N	142°28'W	3,4,7	a
81	Vundik Lake	43SS1a	950	67°23'N	143°45'W	3,4	a
82	Venetie	46SS1A	610	67°03'N	146°25'W	3,4,7	a
83	Fort Yukon	45RR1AM	430	66°35'N	145°15'W	3,4,7	a
84	Black River	42RR1A	650	66°36'N	142°45'W	3,4,7	a
85	Circle City	44QQ3A	600	65°50'N	144°05'W	3,4,7	a
86	Circle Hot Springs	44QQ5	860	65°29'N	144°39'W	3,4	a
87	Dempsey Creek	41RR2A	950	66°06'N	141°48'W	3,4	a
88	Nation River	41QQ1a	3050	65°25'N	141°40'W	3,4	a
89	Eagle Village	41PP1A	900	64°08'N	141°08'W	3,4,7	a
90	Boundary	41PP3A	3300	64°05'N	141°27'W	3,4	a
91	Chicken Airstrip	41PP2A	1650	64°05'N	141°45'W	3,4,7	a
92	Mt. Fairplay	42001a	3100	63°42'N	142°17'W	3,4,5	a
93	Douglas Ski Bowl	34JJ1	1640	58°16'N	134°27'W	3,4,5	b
94	Cropley Lake	34JJ2	1650	58°16'N	134°31'W	1,2,3,4	b
95	Eagle Crest	34JJ3	1000	58°17'N	134°32'W	1,2,3,4	b
96	Fish Creek	34JJ4	500	58°19'N	134°33'W	1,2,3,4	b
97	Upper Long Lake	33JJ2aS	1000	58°11'N	133°53'W	3,4,5,6,7	e
98	Speel River	33JJ3A	280	58°09'N	133°43'W	3,4,5,6,7	e
99	Petersburg Reservoir	32HH1	550	56°47'N	132°56'W	2,3,4,5	b
100	Mitkof Island	32HH2	1050	56°46'N	132°56'W	2,3,4,5	b
101	Crystal Lake	32HH3	1375	56°36'N	132°50'W	2,3,4,5	b
102	Harriet Top	31GG1	2000	55°29'N	131°37'W	3,4,5	b
103	Hunt Saddle	31GG2	1500	55°30'N	131°37'W	3,4,5	b
104	Lake Shore	31GG3	660	55°29'N	131°36'W	3,4,5	b
105	Log Cabin (B.C.)	34KK1	2880	59°45'N	134°58'W	3,4,5	e
106	Five Mile Camp	49RR1	400	65°55'N	149°48'W	2,3,4,5	i
107	Thirty Mile	50RR2a	1300	66°13'N	150°15'W	2,3,4,5	i
108	Prospect Creek	50RR1	980	66°47'N	150°45'W	2,3,4,5	i
109	Cold Foot Camp	50SS1	1000	67°16'N	150°10'W	1,2,3,4	i
110	Dietrich Camp	49SS1A	1550	67°42'N	149°45'W	2,3,4,5	i
111	Table Mountain	49SS3a	2200	67°58'N	149°45'W	2,3,4,5	i
112	Toolik River	49TT1	3100	68°37'N	149°26'W	7	d
113	Sagwon	48UU1	1000	69°26'N	148°34'W	7	d
114	Prudhoe Bay	48VV1	30	70°15'N	148°30'W	7	h
115	Barrow	56WW1	15	71°20'N	156°40'W	7	h
116	Meade River	57VV1	200	70°29'N	157°25'W	7	h
117	Barter Island	43VV1	15	70°08'N	143°37'W	7	h
118	Kavik River	47UU1	200	69°30'N	147°00'W	7	h
119	Candle	61QQ1	20	66°55'N	161°56'W	3,4	a,f
120	Kugruk River	62QQ1	225	65°40'N	162°27'W	3,4	a,f

LEGEND

* Numerals 1,2,3,4,5, and 6 refer to January 1, February 1, March 1, April 1, May 1, June 1, and 7 - for special dates.

* Letters refer to Agency that secures the anow survey, as followa:

- a. Soil Conservation Service
- b. Forest Service
- c. U.S. Army Corps of Engineers
- d. U.S. Army Cold Regions Research & Engineering Lab
- e. Alaska Power Administration
- f. Bureau of Land Management
- g. U.S. Geological Survey
- h. University of Alaska
- i. Alaska Pipeline Office

* Letters following the snow course no. refer to:

- A. Snow course and aerial atadia marker
- a. Aerial stadia marker only
- M. Soil Moisture Station
- P. Precipitation Storage Gage
- S. Snow Pillow

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